UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,586	04/16/2004	Masaki Ogura	PHCF-03089	8179

21254 7590 08/18/2005

MCGINN & GIBB, PLLC
8321 OLD COURTHOUSE ROAD
SUITE 200
VIENNA, VA 22182-3817

EXAMINER	
MARTINEZ, JOSEPH P	

ART UNIT	PAPER NUMBER
2873	

DATE MAILED: 08/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No.	Applicant(s)	
	10/825,586	OGURA, MASAKI	
	Examiner	Art Unit	
	Joseph P. Martinez	2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 June 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 16-19* is/are rejected.

7)☒ Claim(s) *2-15* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *4-16-04* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 16-19 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Wilkerson, Jr. et al. (6539038).

Re claim 1, Wilkerson, Jr. et al. teaches for example in fig. 2, a signal converter for converting a digital input signal to an optical modulation signal, comprising: a Mach-Zehnder type optical modulator (10) to be supplied with the digital input signals controlled in amplitude (col. 2, ln. 7-10), and a bias signal (col. 2, ln. 10-13) for providing the optical modulation signal; a pilot signal-superimposing circuit (40) for superimposing a pilot signal of a frequency on a bias control signal (col. 3, ln. 37-45); monitor circuit (300) for providing a monitor signal by receiving a part of the optical modulation signal supplied from the optical modulator (col. 3, ln. 55-64); a first feedback system (100) for providing an amplitude control signal to control an amplitude of the digital input signal in accordance with a frequency deviation signal obtained from the monitor signal (col. 3, ln. 27-31); and second feedback system (200) for providing the bias control signal to control the bias signal in accordance with a multiplying frequency deviation signal obtained from the monitor signal (col. 3, ln. 31-34).

Re claim 16, Wilkerson, Jr. et al. further teaches for example in fig. 2, a primary frequency component detected (col. 3, ln. 55-60) by said monitor circuit (300) is demodulated by a first demodulator (150) to obtain a first deviation signal (col. 4, ln. 6-13, wherein the office interprets the outputs of demodulators to teach the claimed limitation).

Re claim 17, Wilkerson, Jr. et al. further teaches for example in fig. 2, the first demodulator comprises a mixer (140) and a low pass filter (360, wherein the office interprets the low pass filter to feed both demodulators and therefore each demodulator comprises the same low pass filter, as claimed).

Re claim 18, Wilkerson, Jr. et al. further teaches for example in fig. 2, a secondary frequency component detected (col. 3, ln. 55-60) by said monitor circuit (300) is demodulated by a second demodulator (150) to obtain a second deviation signal (col. 4, ln. 6-13, wherein the office interprets the outputs of demodulators to teach the claimed limitation).

Re claim 19, Wilkerson, Jr. et al. further teaches for example in fig. 2, the second demodulator comprises a mixer (240) and a low pass filter (360, wherein the office interprets the low pass filter to feed both demodulators and therefore each demodulator comprises the same low pass filter, as claimed).

Response to Arguments

Applicant's arguments filed 6-6-05 have been fully considered but they are not persuasive.

Re applicant's arguments on p. 9, wherein the applicant argues that the prior art is undesirably complicated, have been considered, but are not persuasive. The office interprets Wilkerson, Jr. et al. (6539038) to teach a signal converter with the claimed limitations.

Allowable Subject Matter

Claims 2-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art taken alone or in combination fails to anticipate or fairly suggest the limitations of the claims, in such a manner that a rejection under 35 USC 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in dependent claims 2, 3, 5, 9, 11 and 15.

Specifically regarding claim 2, Wilkerson, Jr. et al. (6539038) teaches the state of the art of signal converters.

But, Wilkerson, Jr. et al. fails to explicitly teach the first feedback system comprises a first mixer for multiplying the pilot signal and the monitor signal; a first low pass filter for providing the frequency deviation signal based on a low frequency component obtained from an output of the first mixer; and a first differential amplifier for providing the amplitude control signal in accordance with a difference between an output of the first low pass filter and a first reference signal, as claimed.

Specifically regarding claim 3, Wilkerson, Jr. et al. (6539038) teaches the state of the art of signal converters.

But, Wilkerson, Jr. et al. fails to explicitly teach the second feedback system comprises a first oscillator for generating a multiplying frequency corresponding multiplication of the frequency of the pilot signal; a second mixer for multiplying an output of the first oscillator and the monitor signal; a second low pass filter for providing the multiplying frequency deviation signal based on a low frequency component obtained from an output of the second mixer; and a second differential amplifier for providing the bias control signal in accordance with a difference between an output of the second low pass filter and a second reference signal, as claimed.

Specifically regarding claim 5, Wilkerson, Jr. et al. (6539038) teaches the state of the art of signal converters.

But, Wilkerson, Jr. et al. fails to explicitly teach the second feedback system comprises a second oscillator for generating the frequency of the pilot signal; a band

pass filter for providing a harmonic wave contained in the pilot signal; a third mixer for multiplying the harmonic wave and the monitor signal; a third low pass filter for providing a multiplying frequency deviation signal based on a low frequency component obtained from an output of the third mixer; and a third differential amplifier for providing the bias control signal in accordance with a difference between an output of the third low pass filter and a third reference signal, as claimed.

Specifically regarding claim 9, Wilkerson, Jr. et al. (6539038) teaches the state of the art of signal converters.

But, Wilkerson, Jr. et al. fails to explicitly teach generating a twofold frequency of the frequency of the pilot signal, as claimed.

Specifically regarding claim 11, Wilkerson, Jr. et al. (6539038) teaches the state of the art of signal converters.

But, Wilkerson, Jr. et al. fails to explicitly teach the second feedback system comprises a second oscillator for generating the frequency of the pilot signal.

Specifically regarding claim 15, Wilkerson, Jr. et al. (6539038) teaches the state of the art of signal converters.

But, Wilkerson, Jr. et al. fails to explicitly teach a first oscillator for generating a signal for interior reference of a twofold frequency of the frequency of the pilot signal; and a second oscillator for generating the frequency of the pilot signal, as claimed.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph P. Martinez whose telephone number is 571-272-2335. The examiner can normally be reached on M-F 7:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached on 571-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JPM
8-15-05

Hung Xuan Dang
Primary Examiner